

ABSTRACT OF THE INVENTION

A semiconductor device includes metal interconnects made from a multi-layer film composed of a first metal film formed on a semiconductor substrate with an insulating film sandwiched therebetween and a second metal film deposited on the first metal film. An interlayer insulating film having a via hole is formed on the metal interconnects. A third metal film is selectively grown on the second metal film within the via hole, so that a plug can be formed from the third metal film.